



HARMONIZED SYSTEM
REVIEW SUB-COMMITTEE

NR0385E1
(+ Annexes I, II and III)

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27th Session
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O. Eng.

Brussels, 28 February 2003.

POSSIBLE AMENDMENTS TO THE NOMENCLATURE AND THE
EXPLANATORY NOTES REGARDING THE CLASSIFICATION OF CONTROLLER UNITS
FOR ANTI-LOCK BRAKING SYSTEMS (ABS)
(PROPOSAL BY THE AUSTRALIAN ADMINISTRATION)
(Item III.A.16 on Agenda)

Reference documents :

NR0229E1 (RSC/26)
NR0332E3, Annex D/3 (RSC/26 - Report)

NR0314E1 (RSC/26)

I. BACKGROUND

1. At its 26th Session, the RSC considered a request by the Australian Customs Service that consideration be given to specifying controller units for anti-lock braking systems (ABS) as parts of motor vehicles within the structure of the HS Nomenclature. The Chairperson summed up the discussion by recognising that there did not appear to be support for the limited approach of moving only the ABS controller unit to heading 87.08. However, in his view, there appeared to be some support within the Sub-Committee for a proposal whose scope provided for the transfer of all automotive controller units from heading 90.32 to heading 87.08. It did not make sense to move only the ABS units to heading 87.08 and leave the rest in heading 90.32.
2. The Sub-Committee concluded its discussion by suggesting that the Australian Administration should re-examine its proposal during the intersession with a view to possibly reworking the proposal to broaden its scope, taking into account the comments made by delegates during the discussion of this agenda item.
3. On 20 January 2003, the Secretariat received the following note from the Australian Customs Service.

Note : Shaded parts will be removed when documents are placed on the WCO documentation database available to the public.

File No. 2962

II. NOTE FROM THE AUSTRALIAN ADMINISTRATION

4. “At the 26th Session of the HS Review Sub-Committee, the Sub-Committee examined an Australian proposal to amend the Harmonized System to provide for classification of ABS Controller Units in heading 87.08 as parts of motor vehicle braking systems.
5. Several concerns with the proposal were raised and it was suggested that Australia should re-examine its proposal during the intersession with a view to possibly reworking the proposal to broaden its scope.
6. Australia has conducted a scan of products that might be captured under a broadened proposal. As indicated in our earlier paper, this area of automotive technology is a rapidly expanding and developing area. The scan of products identified a very diverse range of products. The attached document provides more detail, however it should be noted that due to the rapidly developing nature of automotive technology, the scan does not represent a comprehensive listing of all products that would be covered. It is an illustrative snapshot only.
7. The diversity of the products that might be captured under an umbrella category raises issues as to whether the description “controlling and regulating devices” does provide appropriate guidance in grouping such products in the Harmonized System. The methods of operation and functions of the products listed in the attached document vary considerably, and the essential character of the devices is not immediately apparent. Certainly, there are other group identities applicable to the products aside from “controlling and regulating apparatus” that may more specifically describe the products. For example, many of the products are motor vehicle safety devices.
8. It is clear therefore that a broadened proposal would be a significant investment in time and resources on the part of the Sub-Committee, and that, along with the product identification and analysis required to complete such a review, Members would also need to conduct significant consultation with the automotive trade. For this reason, Australia does not believe it is feasible to address a broadened proposal as part of the Third Review.
9. Australia would however like to take the opportunity to address some of the concerns of the Sub-Committee in relation to the original proposal. Australia feels that the goods the subject of that proposal are primarily identifiable as parts for motor vehicle braking systems and further consideration of the merit of moving those goods individually is warranted.
10. While Australia recognises that the product is more specifically described in the current structure as a controlling and regulating device, in this case, Australia is still of the view that the product’s classification within this structure is problematic and that these products should not be classified within heading 90.32 as their essential character is that of a part for a motor vehicle braking system.
11. The ABS unit’s function is to effect braking whether the braking is facilitating ABS, traction control or stability features. Braking is the method by which all ABS features, including traction and stability control, are facilitated. The extra features may sometimes involve greater input from other areas of the motor vehicle, but the function of braking is still the end result of those inputs, and the ABS unit executes the braking function. As a consequence, it is the braking that provides the essential character of the device, not the end uses to which the braking is put or the method by which the braking is facilitated.

12. Furthermore, the ABS unit is mechanically integrated into the brake line; the brake fluid flows through the unit and the unit cannot be removed from the braking system. In this respect it is unlike, for example, steer by wire technology, which directs a signal from a discrete unit to effect a function elsewhere in the motor vehicle. The ABS unit is functionally a part for a motor vehicle's braking system. **Australia** notes that servo brakes are included in this heading, and that they represent a technological improvement over non-power assisted brakes. Likewise **Australia** is of the view that the ABS unit represents yet another advance in braking equipment.
13. The unit also has the commercial identity of a motor vehicle part. It is specifically built and calibrated for use in motor vehicles and cannot be used in other applications. The calibration and design specifications for each unit are not just for motor vehicles generally, but particular types of motor vehicles. Furthermore the product cannot be bolted on as an accessory, nor cannot it be removed once installed. It must be installed into the motor vehicle in the automotive plant where the motor vehicle is produced.
14. There are also a number of other motor vehicle parts that perform a vehicular controlling function of some kind that are still considered motor vehicle parts – for example, steering wheels.
15. In the light of the above, **Australia** believes that these goods are an integral component of a motor vehicle braking system and more correctly belong in heading 87.08, as motor vehicle parts. At this stage, **Australia** has no further amendment to make to the text of its earlier suggested amendments to the Harmonized System”.

III. SECRETARIAT COMMENTS

16. The Secretariat agrees with the **Australian** Administration that a broadened proposal would involve a significant investment in time and resources on the part of the Sub-Committee, Members and the Secretariat. Considering the resources required to examine the proposals tabled for the Information Technology sector for the Third Review Cycle, it is the view of the Secretariat that it would be very difficult to address a broadened proposal as part of the Third Review.

IV. CONCLUSION

17. The Sub-Committee is invited to take account of the **Australian** comments when it examines this agenda item. In this context, the Sub-Committee may wish to re-consider its views with regard to **Australia**'s original proposal, reproduced in Annex II to this document, on the basis of the information presented by the **Australian** Administration in paragraphs 6 to 15 above and the additional information set out in Annex I to the document.

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Additional Information from the Australian Administration

Device	Description
BRAKES	
Anti-lock Braking System (ABS)	<p>The ABS system provides vehicle directional stability under braking.</p> <ul style="list-style-type: none"> • The system comprises electronic, hydraulic, and sensing equipment to constantly monitor the individual wheel speeds and calculates if any braking intervention is needed. • If braking intervention is required an electronic command is sent to the hydraulic command which either releases, holds or applies brake pressure to the required wheels.
Automatically-activated full braking system (DaimlerChrysler)	<p>Automatically activates the maximum braking power in the vehicle as soon as a rear-end collision with a vehicle travelling in front has become inevitable.</p> <ul style="list-style-type: none"> • Reduces the effects of unavoidable accidents. • Reduces the impact energy of a collision. • Uses an ABS system, as described above.
Brake Assist (BAS) (Mercedes-Benz)	<p>Electronic handling/control system.</p> <ul style="list-style-type: none"> • In emergency situations the BAS applies maximum braking force. • Uses an ABS system, as described above.
CRUISE CONTROL	
"Distronic" automatic distance cruise control system (DaimlerChrysler)	<p>"Distronic" is used to monitor and adjust the speed and distance between vehicles travelling in dense lines of traffic. The cruise control system uses the ultra-sonic sensor's signal to reduce the speed of the car in the same way the cruise control automatically regulates the speed (by regulating the amount of fuel delivered to the engine).</p> <ul style="list-style-type: none"> • "Distronic" automatically adjusts the distance between the driver's vehicle and the vehicle ahead. • There is current research into using "Distronic" to exchange data between vehicles. For example cars travelling ahead relay data on the magnitude of their braking deceleration to vehicles travelling behind. The cruise control system then uses this signal to reduce the speed of the vehicle travelling behind and thus increase the distance to the car directly ahead.

<p>Active Cruise Control (ACC) (BMW)</p>	<p>A radar eye that recognises moving vehicles up to 120 metres ahead. The ACC adjusts the speed of the car according to the changing flow of the surrounding traffic.</p> <ul style="list-style-type: none"> • Beams reflect off the vehicles ahead. • Sensors pick up the reflection and the system calculates whether the car's speed needs to be adjusted. • ACC automatically reduces the speed of the car, maintaining a constant distance from the car ahead. • Accelerates to cruise control speed when lane ahead clears. • Similar to DaimlerChrysler's "Distronic" system (above). • The radar eye and cruise control do not appear to be housed in the same assembly.
<p>ENGINE</p>	
<p>Engine Control Module (Delphi)</p>	<p>Computer technology to merge continuous measurement of the inputs that affect the way an engine runs.</p> <ul style="list-style-type: none"> • The ECM makes more than 80 measurements per second. • These measurements enable the adjustment of fuel, air and spark to optimise engine performance.
<p>Engine Cooling (BMW)</p>	<p>Map-controlled engine cooling.</p> <ul style="list-style-type: none"> • Digital engine management regulates temperature according to preset parameters. • Interprets intensive use of the accelerator as a message to the "Electronic Black Box" that higher engine temperature is soon to be reached; the temperature is brought down by the opening of the thermostat valve allowing more coolant into circulation. • The "Electronic Black Box" also recognises when the engine is operating at low revs and gives a signal to release less coolant; the engine automatically becomes warmer.
<p>Exhaust Gas Recirculation (EGR) Valves-Linear (Delphi)</p>	<p>Reduces oxides of nitrogen in emissions by recirculating metered amounts of exhaust gas into the intake of the engine.</p> <ul style="list-style-type: none"> • The flow of gas is matched to the engine requirements by the vehicle's computer. • The computer measures engine parameters - speed, load, and temperature from the sensor inputs. • The computer calculates the EGR flow. • The computer sends commands to the EGR valve which

	opens or closes, adjusting the amount gas being recirculated.
LIGHTS	
Dusk Sensor (Fiat)	Headlights switch on automatically as soon as the sensor detects a variation in lighting conditions, either on entering tunnels or in the evening. <ul style="list-style-type: none"> This is operated by an electro-mechanical switching mechanism.
SAFETY	
"Lane Assistant" (DaimlerChrysler)	Sensors and interpretive electronics that keep an eye on the road markings (centre and lane-side white line markings). <ul style="list-style-type: none"> Warning sounds emitted to warn drivers as soon as the vehicle is in danger of leaving the lane or the road (more for trucks than PMVs). The sensors, interpretive electronics and warning device are separate mechanisms.
"Pre-Safe" (Mercedes-Benz)	Sensors register critical road situations such as emergency braking and skidding, and cause : <ul style="list-style-type: none"> Reversible seat-belt tensioners to activate; The front passenger seat to move; and The sliding sunroof to automatically close. <p>Each element is operated by separate mechanisms.</p>
Road Safety-Emergency Mode (Holden-Australia)	Activates after seat-belt tensioners are triggered. <ul style="list-style-type: none"> The on-board computer turns the engine and fuel pump off; The doors unlock; and The dome lamp turns on.
Occupant Protection Systems (Air Bags) (Robert Bosch)	A network of sensor signals collated in a central airbag ECU, incorporating : <ul style="list-style-type: none"> Pre-crash sensors, Airbags, and Restraints; The system deactivates the fuel pump and the electrical system, and unlocks the doors; An automatic transmission of an SOS signal can be incorporated. This is a system of interactive but separate systems.
"Smart Window" (Delphi)	A non-contact window management system, including : <ul style="list-style-type: none"> An infra-red transmitter and receiver;

	<ul style="list-style-type: none"> • An optically controlled sensor that detects obstacles in the path of the closing window; • Which, on detection, stops or reverses the window closing within 25 microseconds. • The system operates using electronic switches.
SEATS	
Seat Memory (Fiat)	<p>The preferred positions of the seats and mirrors (for up to 3 people) can be saved in the memory, and activated by pressing a key.</p> <ul style="list-style-type: none"> • The system operates using electronic switches.
STEERING	
"Steer-by-wire" System (Delphi)	<p>"Steer-by-wire" eliminates the mechanical connection between the driver and the vehicle's front wheels.</p> <ul style="list-style-type: none"> • The mechanical steering is replaced by two actuators. • The actuators receive input from the control module and send signals to turn the front wheels. • The system uses an electric motor to provide road feedback to the driver's handwheel. • This device relies on driver input.
SUSPENSION	
"Airmatic" (Mercedes-Benz)	<p>Electronically controlled air suspension system.</p> <ul style="list-style-type: none"> • From 140 km/h the body of the car automatically lowers by 15 mm. • Similar to ABS functionality.
TRANSMISSION	
Electro-hydraulic clutch operation & gear shift (BMW)	<p>An electric pump in the clutch and gearshift hydraulics starts when the doors of the car are unlocked by remote control.</p> <ul style="list-style-type: none"> • The system builds up pressure in order to operate the clutch and shift the gears as soon as the engine is started. • Similar to ABS functionality.
TYRE PRESSURE	
Tyre Pressure Control (TPC) (BMW)	<p>A system that automatically monitors the tyre pressure at all times.</p> <ul style="list-style-type: none"> • Sensors in the tyres measure the tyre pressure and air temperature every 3 seconds. • The data is transmitted to an electronic control unit every 54 seconds. • The slow loss in air pressure is promptly detected. • The sudden pressure loss of air pressure (more than 2.9 psi per minute) results in data being measured and

	conveyed every 0.8 seconds. <ul style="list-style-type: none">• The system alerts the driver.• This is an electric signalling device.
WIPERS	
Rain Sensor (Fiat)	In rain, a sensor switches on the windscreen wipers, regulating the stroke. <ul style="list-style-type: none">• When the rain ceases the wipers are automatically switched off. This is an electro-mechanical switch.

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Reproduced from Annex I to Doc. NR0314E1

AUSTRALIAN PROPOSAL

Proposed amendments to the Nomenclature

“8708.3 - Brakes and servo-brakes and parts thereof :

8708.31 - - Mounted brake linings

[8708.32 - - Controller units for anti-lock braking systems (ABS), whether or not they incorporate traction and/or stability control functions]

8708.39 -- Other

Proposed amendments to the legal Notes to Chapter 87 and 90.

(1) Note 2 (g) to Section XVII.

Delete and Substitute :

(g) “Articles of Chapter 90 [excluding apparatus designed for controlling the braking and/or traction and/or stability of motor vehicles of heading 87.08];”

Note : This amendment will remove the present exclusion of the goods from Chapter 87.

(2) Insert the following new Note 1 (n) to Chapter 90 :

(n) “[Goods designed for controlling the braking and/or traction and /or stability of motor vehicles of heading 87.08.]”

Note : This amendment will provide direction that ABS controller units are not classifiable in Chapter 90.

(3) Note 7 to Chapter 90, first line.

Delete and substitute :

“[Subject to Note 1 (n) above] heading 90.32 applies only to :”

Note : This amendment will clarify the direction provided in Note 1 (n) to Chapter 90.

Proposed amendments to the Explanatory Notes.

(1) Page 1740.

Insert the following new item (P) :

[(P) Anti-lock braking and/or traction and/or stability systems (ABS), being ABS controller units.]

Note : This amendment will provide direction that ABS controller units are classifiable in heading 87.08 as parts of motor vehicles.

(2) Page 1859.

Heading 90.32, paragraph II.

Insert the following new exclusion (c) :

[(c) Anti-lock braking and/or traction and/or stability systems (ABS) of **heading 87.08.**]

Note : This amendment will provide direction that ABS should not be classified with other controlling devices.

Conclusion

Australia is of the view that the growing developments in motor vehicle dynamic control systems will need to be addressed as part of the Third Review of the HS. These systems should be classifiable as parts of motor vehicles and will require consideration to ensure that they are so captured by the HS.

The controller unit for an anti-lock braking system is presented to the 26th Session of the RSC for consideration to ensure its classification, as parts of motor vehicles, in heading 87.08.

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ABS controller unit – subject of the Australian proposal



ABS controller unit – mounted in the vehicle


